

Department of Health and Human Services
National Institutes of Health
National Institute of Nursing Research
Minutes of the National Advisory Council for Nursing Research

September 15–16, 2015

The 87th meeting of the National Advisory Council for Nursing Research (NACNR) was convened on Tuesday, September 15, 2015, at 1:00 p.m. in Conference Room, Building 31, National Institutes of Health (NIH), Bethesda, Maryland. The first day of the meeting was an open session and adjourned that same day at 5:00 p.m., reconvening on Wednesday, September 16, 2015, at 9 a.m. and adjourning at 9:55 a.m. The closed session of the meeting, which included consideration of grant applications, was convened on Wednesday, September 16, 2015, at 10:00 a.m. and continued until adjournment at 1:00 p.m. Dr. Patricia A. Grady, Chair, NACNR, presided over both sessions of the meeting.

OPEN SESSION

I. CALL TO ORDER, OPENING REMARKS, COUNCIL PROCEDURES, AND RELATED MATTERS—Dr. Patricia Grady, Director, National Institute of Nursing Research (NINR)

Dr. Grady called the 87th meeting of the NACNR to order, and welcomed all Council members, visitors, and staff. Council member Dr. Bernadette Mazurek Melnyk was absent on Tuesday. Dr. Grady recognized new Council member Dr. Jennifer Temel.

Conflict of Interest and Confidentiality Statement

Dr. Ann Knebel, Executive Secretary, NACNR, noted that the meeting was being recorded for purposes of the minutes and that audio recordings would be destroyed once the minutes were completed. She noted that NIH is a smoke-free campus. Dr. Knebel informed the Council that the scientific presentations were being videotaped and would be posted on the NINR website (www.ninr.nih.gov).

Minutes of the Previous NACNR Meeting

Council members received the minutes of the May 19–20, 2015, NACNR meeting by email. A motion to accept these minutes was made, seconded, and approved unanimously. The approved minutes of each

NACNR meeting become part of the Institute's permanent record and are posted on the NINR website (www.ninr.nih.gov).

Dates of Future Council Meetings

Council members were asked to confirm their calendars for the following meeting dates..

2016

January 26–27 (Tuesday-Wednesday)

May 24–25 (Tuesday-Wednesday)

September 13–14 (Tuesday-Wednesday)

2017

January 24–25 (Tuesday-Wednesday)

May 23–24 (Tuesday-Wednesday)

September 12–13 (Tuesday-Wednesday)

II. REPORT OF THE DIRECTOR, NINR—Dr. Patricia Grady, Director, NINR

The Director's report focused on activities and news from the Department of Health and Human Services (HHS), NIH, and NINR since the last Council meeting. Highlights included:

Budget Update—Dr. Grady reviewed recent appropriations history. The trend toward operating under a Continuing Resolution presents challenges for planning and setting realistic timelines. The President's Budget for fiscal year (FY) 2016 includes a 2.6 percent increase for NINR and an overall 3.3 percent increase for NIH. Dr. Grady reviewed the distribution of NINR funds, noting that the largest allocation of the budget goes to extramural research project grants. The budget allocations reflect NINR's strong commitment to both training and investigator-initiated research.

HHS News—The Office of the Assistant Secretary for Health recently released HHS Education and Training Resources on Multiple Chronic Conditions (MCC) for health professionals who provide care to people living with MCC. Details are available at <http://www.hhs.gov/ash/initiatives/mcc/>.

Dr. Grady reported the death of former HHS Secretary Richard Schweiker, who was instrumental in early NINR successes.

HHS and 15 other federal departments and agencies published a notice of proposed revisions to the Common Rule for protection of human subjects involved in research. Proposed changes are intended to calibrate oversight to level of risk, enhance the role of research participants, broaden public access, and simplify and streamline consent and Institutional Review Board (IRB) processes while increasing safeguards for confidentiality. The deadline for public comment is December 7, 2015.

NIH News—Dr. Grady reported that Louis Stokes, who represented Ohio in the U.S. House of Representatives from 1969 to 1999, recently passed away. An NIH champion, Stokes was specifically focused on nursing research and health disparities.

A draft of the congressionally mandated NIH Strategic Plan is now available for public comment. Dr. Grady noted that NIH Deputy Director Lawrence Tabak would provide an overview of the current draft to the Council on Wednesday morning.

The first NIH Digital Summit is scheduled for October 19. Event details are available at: www.nih.gov/news/events/digital-summit.htm.

New members have been appointed to the NIH Council of Councils. <http://dpcpsi.nih.gov/council/index>
The NIH Council of Councils was established to advise the NIH Director on policies and activities of the Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI), including making recommendations on research that represents important areas of emerging scientific opportunity, rising public health challenges, and knowledge gaps that deserve special emphasis or would otherwise benefit from strategic planning and coordination.

Dr. Walter Koroshetz has been appointed Director of the National Institute of Neurological Disorders and Stroke (NINDS). Dr. Koroshetz, a well-known stroke researcher, has served as NINDS Deputy Director for eight years and Acting Director for one year.

Dr. William Riley has been appointed Director of the Office of Behavioral and Social Sciences Research. Dr. Riley previously held positions at the National Institute of Mental Health (NIMH); the National Heart, Lung, and Blood Institute (NHLBI); and the National Cancer Institute (NCI).

Dr. Alan Guttmacher, Director, Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), has announced plans to retire on September 30, 2015. During his tenure at NICHD,

Dr. Guttmacher championed the development of a scientific vision for the Institute and launched the Human Placenta Project.

NIMH Director Dr. Thomas Insel is retiring at the beginning of November. Dr. Insel led NIMH for the past 13 years, during which the Institute launched the Psychiatric Genomics Consortium and the National Database for Autism Research. He is joining Google Life Sciences at Alphabet.

Dr. Sally Rockey, NIH Deputy Director for Extramural Research, is leaving NIH in mid-September to lead the USDA research foundation. Dr. Rockey was responsible for expanding transparency about NIH policies and processes.

NIH has announced its HIV/AIDS research priorities for the next 3–5 years, which include reduction of HIV/AIDS incidence, development of next-generation HIV therapies, research toward a cure, basic research, HIV-associated comorbidities, reduction of HIV/AIDS-related health disparities, and research training.

NINR News—NINR will host the Advancing Science, Improving Lives symposium on October 13 to begin the commemoration of its 30th anniversary. Additional events are planned over the next year.

The 2015 NINR Director's Lecture series included Dr. MarySue Heilemann's presentation of "From the Silver Screen to the Web: Portrayals of Nursing in Media" in June (www.youtube.com/user/NINRnews) and Dr. Jackie Dunbar-Jacob's presentation titled "Scientific Pursuit of Effective Medication Adherence" in September. This presentation will also be archived and available to view on the web.

NINR and the NIH Office of Rare Diseases Research cosponsored a workshop, "The Spectrum of Caregiving and Palliative Care in Rare Diseases" in June. The resulting findings and recommendations will provide guidance in developing strategies for advancing the science of palliative care and caregiving in rare disease and research programs.

A new NINR brochure, *Palliative Care for Children: Support for the Whole Family When Your Child Is Living with a Serious Illness*, provides information about pediatric palliative care. The brochure is part of the Palliative Care: Conversations Matter® campaign, which was identified as the 2014 "story of the year" by the Pallimed blog (www.pallimed.org/2015/01/results-of-2014-stories-of-year-in.html)

A number of relevant papers have recently been published:

Dr. Grady was quoted in a *Nature* article on nursing science, “Nurses Know Best.” Another article, “Idea Festival for Nursing Science Education,” appeared in *Nursing Outlook* (July–August 2015) and “Nursing Science: Claiming the Future” will be available in October on the *Journal of Nursing Scholarship* website. “A Blueprint for Genomic Nursing Science” (*J Nurs Scholarsh* 2013 Mar) was selected for award from Sigma Theta Tau International honor society of nursing. “Peripheral Total Tau in Military Personnel Who Sustain Traumatic Brain Injuries During Deployment” was published in *JAMA Neurology*. Dr. Grady and NINR Scientific Director Dr. Ann Cashion coauthored a *Nursing Outlook* article on development of the NIH Symptom Science Model.

NINR has launched a web page describing NINR efforts in the area of precision medicine (www.ninr.nih.gov/precisionmedicine).

Selected NINR funding opportunity announcements are available at www.ninr.nih.gov/ResearchAndFunding/DEA/OEP/FundingOpportunities/.

Dr. Grady noted the following NINR staff news:

- Dr. Yvonne E. Bryan has been appointed Deputy Director of the Division of Extramural Science Programs.
- Dr. Rebecca Henry has joined the NINR Office of Extramural Programs.
- The following NINR staff will receive NIH Directors’ Awards: Melissa G. Barrett and Andria M. Cimino for the End of Life Module Development Team; Sheila M. Bissessar, Emilia Colon, and Jerri J. Johnson for the Administrative Workflow Team; and Irene Arveson for the NIH Ebola Patient Care Response Team.

Training Opportunities—Applications for the Summer Genetics Institute (June 1–26, 2016) opens in November 2015. Applications for the 2016 Graduate Partnerships Program will be accepted at www.ninr.nih.gov/GPP through December 1, 2015.

III. OVERVIEW OF THE NINR INTRAMURAL RESEARCH PROGRAM—Dr. Ann Cashion, Scientific Director for the Division of Intramural Research, NINR

Dr. Cashion provided an organizational overview of the Division of Intramural Research (DIR) and highlighted the Division’s current research activities.

The DIR is dedicated to conducting basic and clinical research on the interactions among molecular mechanisms underlying a single symptom or cluster of symptoms and environmental influences on individual health outcomes. It encompasses the individual variability inherent in symptoms associated with digestive disorders, cancer-related fatigue, traumatic brain injury (TBI), and posttraumatic stress disorders (PTSD) as well as clinical interventions to alleviate these symptoms. The long-term objective of the Division is to create an NINR symptom science center to promote discovery and inform personalized approaches to symptom management.

Dr. Cashion reviewed the Division's organizational structure and highlighted scientific advances in each of the Division's three Branches: Biobehavioral, Symptom Management, and Tissue Injury. The Biobehavioral Branch supports research into the interplay of behavioral, biological, and environmental determinants of health and wellness across populations in the areas of digestive disorders and clinical neuroscience. The Symptom Management Branch is focused on improving understanding of the underlying biological mechanisms of a range of symptoms and their effect on patients, and the biological and behavioral bases for how patients respond to interventions. This Branch includes three units: Genomic and Clinical Biomarkers Unit, the Symptom Biology Unit and the Cardiovascular Symptoms Unit. The Tissue Injury Branch conducts clinical and laboratory-based studies on the mechanisms of tissue injury, including the identification of molecular targets and pathways activated in response to cellular damage, to provide greater understanding of the pathophysiology associated with tissue injury and identify novel targets for therapeutic intervention. Within this Branch are three units; the Brain Injury Unit, the Vascular Biology Unit, and the Neuromuscular Symptoms Unit

IV. NINR's CLINICAL RESEARCH—Dr. Suzanne Wingate, Clinical Director, Division of Intramural Research, NINR

Dr. Wingate presented an overview of NINR's clinical research program. The overall goal of NINR's clinical research program and the symptom science model is the development of novel clinical interventions to alleviate symptoms. The majority of clinical research conducted on the NIH campus occurs in the NIH Clinical Center that was built with the "bench to bedside" concept in mind—that is, patient care units are located in close proximity to research labs.

Dr. Wingate reviewed the similarities and differences between the Clinical Center and other academic medical centers. Similarities include accreditation processes for both clinical care (The Joint Commission) and research (Association for the Accreditation of Human Research Protection Programs). Differences include, among other things, that the Clinical Center does not have an Emergency Room.

The Clinical Center has unique resources such as the Biomedical Translational Research Information System, which houses research data from multiple systems across NIH. This system includes data collected from over 500,000 patients seen at NIH over the past 40 years. These data are available to any intramural investigator. In addition, clinical researchers have access to the NIH electronic medical record known as CRIS. While most institutions use electronic medical records, the CRIS system is engineered specifically for clinical research, linking clinical data to the corresponding research study.

NINR has trainees who come from across the academic continuum: high school, college, postbaccalaureate, doctoral and postdoctoral. At NIH students have the ability to collaborate with cutting-edge experts in basic science as well as in clinical research. Dr. Wingate reviewed the functions of the NINR Clinical Director's Office (CDO), which oversees all clinical aspects of NINR research conducted on the NIH Bethesda Campus. For example, the CDO provides and monitors the clinical care of NINR research participants, performs clinical competency assessments and associated training for all staff and trainees, and works with the NIH Credentialing Office to credential all clinicians. The Office also coordinates pre-IRB protocol review and performs ongoing protocol review, provides regulatory oversight and quality management review of protocols, and continuously evaluates the resource needs of protocols. Current CDO staff includes a nurse practitioner, research nurses, a quality management specialist, and a medical officer.

The NINR-intramural portfolio includes: 45% clinical trials; 45% natural history studies; and 10% screening studies. These percentages are similar to the overall NIH research portfolio. NINR studies look at a variety of symptoms and conditions ranging from pain to vascular health. NINR also studies a variety of populations, such as those at risk for disease and those with existing symptoms or disorders. Research participants can be referred from an outside healthcare provider or they can "self-refer", which is becoming more common. Subjects can also contact the NIH Protocol Referral and Public Liaison Office or find studies on clinicaltrials.gov. Several NINR studies also use social media for recruitment.

In closing, Dr. Wingate highlighted important clinical areas of investigation by NINR scientists, including biomarkers and therapies in solid organ transplant recipients, symptoms and physical performance in patients with advanced heart failure, and the nature of chronic symptoms, especially pain and fatigue.

V. ANTIOXIDANT THERAPY IN RYR1-RELATED CONGENITAL MYOPATHY—Dr. Katherine Meilleur, Intramural Program, NINR

Dr. Meilleur presented preliminary results on the first study phase of antioxidant therapy for RYR1-related congenital myopathy. Ryanodine receptor type 1-related myopathies (RYR1-RM) are the most common congenital muscle diseases in the United States. RYR1 is a homotetrameric protein that serves as a calcium

release channel located at the membranous surface of the sarcoplasmic reticulum in skeletal muscle. Essentially, this process results in mitochondrial damage and, ultimately, skeletal muscle damage and weakness—affecting development of muscles and ability to walk. NINR researchers have begun testing the drug N-acetylcysteine (NAC) to see if it decreases muscle damage in people with RYR1-RM and improves their exercise tolerance.

Dr. Meilleur reviewed the symptoms of RYR1-related myopathy, the dominant and recessive phenotypes, and what led researchers to test NAC. In preclinical work with zebrafish NAC has been shown to decrease oxidative stress, thus improving skeletal muscle histopathology and endurance. Patient myotube models have also shown promise with NAC. Since NAC is approved by the U.S. Food and Drug Administration (FDA) for other indications, NINR researchers received permission to conduct this clinical trial.

Twenty patients have enrolled in the baseline phase I trial (0-6 months). The randomized, placebo-controlled, double-blind phase II trial (6-12 months) starts in September 2015. Preliminary analyses found correlations between a pulmonary function measure and cardiopulmonary exercise testing (CPET) and between six-minute walk test (6MWT) and CPET. Differences in CPET between adults and children indicate this may not be a good outcome measure for children. Muscle ultrasound showed common patterns among children compared to adults with muscle patterns changing with age. This is the first study to show that the rectus femoris becomes more involved in RYR1-RM as patients age. To improve muscle ultrasound interpretation, qualitative methods are being developed to measure muscle thickness and greyscale. The research team is analyzing additional outcome measures.

VI. THE EFFECTS OF BLACKCURRANT AND OMEGA-3 FATTY ACIDS ON ENDOTHELIAL FUNCTION AND BIOMARKERS OF VASCULAR HEALTH—Dr.

Marguerite Engler, Deputy Scientific Director, Division of Intramural Research, NINR

Dr. Engler provided an overview of NINR-supported intramural research on the effects of dietary bioactive compounds on cardiovascular disease. Cardiovascular diseases continue to be the leading cause of death and disability in the United States. Numerous studies have shown the beneficial effects of fruits, vegetables, and omega-3 fatty acids in reducing the risk of cardiovascular disease. Bioactive compounds found in these foods, called flavonoids, seem to play a role in protecting the heart. In addition to being antioxidants, flavonoids like omega-3 fatty acids also increase the level of nitric oxide in blood vessels, which helps keep them open and free of damaging clots and inflammation.

NINR-supported clinical investigations have demonstrated that antioxidant vitamins restore blood vessel function in children with high cholesterol levels. Dr. Engler's research also has shown that supplementation with the omega-3 fatty acid improves blood vessel health and changes the size of low-density lipoprotein particles so they are less likely to stick to blood vessel walls and form a plaque that narrows and stiffens the walls (atherosclerosis). Dr. Engler's previous work suggests that dietary changes can affect physiological mechanisms that slow the progression of atherosclerosis and associated cardiovascular diseases.

Dr. Engler is currently Principal Investigator of a randomized, double-blind, placebo-controlled trial in healthy older adults looking at the effects of dietary blackcurrant extract and PCSO-524 on endothelial function and biomarkers of vascular health. The goal is to determine the effects of blackcurrant extract, PCSO-524, or the combination of blackcurrant extract & PCSO-524 on endothelial function (flow-mediated brachial artery dilation) and arterial stiffness (cardio-ankle vascular index) as indicators of cardiovascular risk and atherosclerosis. The study also will examine the effects of the supplements on biomarkers of vascular health (endothelial dysfunction, inflammation, injury, oxidative stress, nitric oxide status), lipids and fatty acid profiles, and flavonoid profiles.

VII. THE ROLE OF NMDA RECEPTOR IN RADIATION-RELATED FATIGUE—Dr. Leorey Saligan, Symptom Biology Unit, Division of Intramural Research, NINR

Dr. Saligan provided an overview of his research, which focuses on understanding biobehavioral mechanisms of fatigue with the long-term goal of developing novel interventions that can alleviate this symptom in a variety of clinical conditions. Fatigue during cancer treatment is the most distressing symptom reported by patients and is often managed by stopping therapy or lowering the treatment dose, both of which can adversely affect treatment outcomes. Through his research, Dr. Saligan aims to develop more effective ways to manage fatigue and, as a result, improve overall treatment outcomes. His research program is divided into two areas: acute fatigue and chronic fatigue.

In the area of acute fatigue, Dr. Saligan's work is directed toward understanding the role of oxidative stress and inflammation in fatigue development. His current findings show a significant correlation between fatigue development and increased levels of erythrocyte oxidative stress, as well as differential expression of genes associated with impairment of mitochondrial integrity. Furthermore, he recently observed a significant association between upregulation of neuroinflammatory markers and worsening of fatigue symptoms. Dr. Saligan currently is pursuing these markers through *in vivo*, *in vitro*, and *ex vivo* investigations to further understand their role in fatigue development. He also is using neuroimaging techniques to describe signs of oxidative stress and inflammation in the brain during fatigue development.

He has developed a novel exercise intervention geared to improve the aerobic metabolism of patients in order to potentially reduce oxidative stress, inflammation, and fatigue.

Dr. Saligan's chronic fatigue research program focuses on the lingering fatigue symptoms that are experienced by patients after completion of cancer therapy or years after initial diagnosis. His group is investigating whether alteration of central mechanisms, including the sympathetic (adrenergic) and hypothalamic-pituitary-adrenal (HPA) pathways, has a role in the prolonged fatigue experience of these patients. Furthermore, he is investigating the relationship of fatigue with other behavioral symptoms including pain, sleep, depression, anxiety, and catastrophizing. His research team is currently conducting a clinical trial investigating the effect of ketamine on fatigue following cancer therapy including looking at the effect of ketamine on brain-derived neurotrophic factor (BDNF) levels, markers of inflammation and mitochondrial function, as well as on cognitive function and skeletal muscle strength.

VIII. Q & A PANEL DISCUSSION

Questions, Comments, and Discussion Points Included:

- **Dr. Saligan, are the receptors you mentioned predictive or diagnostic biomarkers? Do they change over time?**

The biomarkers are predictive. Using Fisher's ratio, the biomarkers classify patients as high and low fatigue to one year posttreatment.

- **Dr. Engler, is this just a prevention approach or an opportunity to reverse damage? Has any study been done in terms of physical activities?**

The approach has great potential for people who already have hypertensive disease. There have been studies that show exercise increases flow and dilation. However, there have not been many studies looking at the combination of bioactive compounds and exercise; this is an important avenue for future research.

- **Dr. Meilleur, how does participant recruitment work in your study?**

Patient advocacy groups are the best means of recruitment, and the neuromuscular clinicians as well.

- **How can extramural scientists access the phenotyping techniques you described?**

NINR is very supportive of training programs. In particular, the Summer Genetics Institute provides intensive training that teaches these techniques. Extramural researchers could contact any of the NINR intramural researchers to request training on a particular technique.

IX. NIH STRATEGIC PLAN—Dr. Lawrence Tabak, Deputy Director, NIH

Dr. Tabak provided an overview and status update of the NIH-wide Strategic Plan. The Consolidated and Further Continuing Appropriations Act of FY2015 (Cromnibus) included legislative language mandating that NIH develop and submit to Congress a scientific five-year strategic plan. The 21st Century Cures Act also requires that NIH issue a five-year plan. In order to advance its mission and fulfill these requests, NIH is developing a five-year NIH-wide Strategic Plan to outline a vision for biomedical research that will pursue fundamental knowledge about the nature and behavior of living systems and apply that knowledge to extend healthy life and reduce illness and disability. NIH senior leadership and staff from all 27 Institutes, Offices, and Center (IOCs), with input from the Advisory Committee to the Director of NIH, have developed a framework for the Strategic Plan.

The framework identifies areas of opportunity that apply across biomedicine and unifying principles to guide NIH in supporting the biomedical research enterprise. These areas of opportunity focus on fundamental science, health promotion/disease prevention, and treatments/cures. The aim is to exemplify the breadth of IOC priorities by identifying major cross-cutting themes. The myriad important research opportunities for specific disease applications are covered in individual strategic plans from each IOC and, thus, will not be the focus of this larger NIH-wide Strategic Plan. After incorporating feedback from the public comment period, feedback now is being requested from the National Advisory Councils. The NIH-wide Strategic Plan is due to Congress in December 2015.

Questions, Comments, and Discussion Points Included:

- **How will you balance the framework across the three areas?**

The portfolio is a little more than 50 percent basic science and is likely to remain so.

- **Not including IOC agendas in the NIH Plan could result in exclusion of important cross-cutting ideas. For example, NINR's agenda includes self-care and symptom science, which are cross-cutting areas.**

If the Plan reflected each IOC special approach, there would be 27 special approaches. Ideas will be included that have resonance across the agency to show that it is a good steward of public funds. The areas of opportunity will be rather broad in nature; a balance must be achieved.

- **Could you explain more about the examples you will be using from the IOCs?**

Efforts will be made to strike a balance to acknowledge interests of the IOCs, but all 80 examples that were submitted cannot be used. Some examples will have to cover several Institutes. Congress did not request a report of NIH accomplishments; they are interested in how NIH does business. Other stakeholders are more interested in the highlights of exciting new research breakthroughs. The Plan is being crafted to resonate with Congress and with stakeholders.

- **It is important for the Plan to show that important, cross-cutting work is taking place across NIH, and not in silos.**

The Plan cannot be all things to all people; it would easily become an overwhelming document that no one would read. Distilling the commonalities is difficult.

- **How does the Plan draw out ethical concerns and the impact of multistate healthcare?**

To accomplish the goals with good stewardship in mind, it is important to articulate the new set of ethical issues that surround the forging of partnerships that are crucial to future success. Partnerships must be created in a careful, thoughtful way to avoid unintended consequences.

- **The emphasis on health promotion and disease prevention is important, given chronic disease incidence and healthcare spending. What about investments into interventions that are not scalable?**

The Plan tries to capture the need for scalability and cost-efficient interventions for multiple chronic conditions. On the other hand, very rare diseases and conditions also must be studied.

- **Efforts to eradicate pandemics are important, but other organizations like the Centers for Disease Control and Prevention are doing that. Why is NIH including that in the Plan?**

NIH must be careful not to tread on the purview and responsibility of other agencies, and NIH has been criticized for investing too much into the study of infectious diseases. Consider, though, that if a pandemic is ended, there will be no need to invest in further research on that infectious disease.

- **The continued emphasis on workforce is important. What kinds of ideas about the workforce arena will the Plan include?**

There is a persistent gap related to clinician scientists. How can programs that work for Ph.D.s be drawn upon but adjusted to work for clinician investigators? Retention is the other workforce issue. NIH is contemplating how to smooth that transition from first R01 to first competitive renewal.

- **How much of the Plan reflects what would be done with better funding?**

The Strategic Plan is focused on how NIH is using the resources it already has, not as a tool for requesting additional funds. The document is intended to offer assurance that when decisions are made, this is the process that is followed to ensure good stewardship of resources provided.

- **Junior researchers are finding it more difficult to obtain NIH funding and senior researchers are staying longer. Does the Plan address ways to give junior researchers more opportunities?**

Across NIH, the success rate for new-to-NIH investigators has been “normalized.” The early career review program involves ad hoc reviewers who come to study sections to see how reviews are done. They gain insights, which is enormously valuable for junior investigators. They review only a few applications, and they are the second or third readers so that their impact on review is attenuated.

Dr. Grady thanked participants and attendees and adjourned the open session of the meeting.

CLOSED SESSION

REVIEW OF APPLICATIONS

NACNR members considered 129 research and training grant applications on which NINR was the primary Institute; these applications requested a total of \$38,229,830 (direct costs year 01). The Council also considered 384 applications on which another Institute/Center was primary and NINR was secondary. These applications requested a total of \$125,457,138 (direct costs year 01). The Council concurred with the Initial Review Group recommendations on these 513 applications.

ADJOURNMENT

The 87th meeting of the NACNR was adjourned at 1:00 p.m. on September 16, 2015.

CERTIFICATION

I hereby certify that the foregoing minutes are accurate and complete.

Patricia A. Grady, Ph.D., R.N., F.A.A.N.
Chair
National Advisory Council for Nursing Research

Ann R. Knebel, Ph.D., R.N., F.A.A.N.
Executive Secretary
National Advisory Council for Nursing Research

COUNCIL MEMBERS PRESENT

Dr. Patricia A. Grady, Chair
Dr. Ann Knebel, Executive Secretary
Dr. Julie Anderson
Dr. Cynthia Barnes-Boyd
Mr. James Corbett
Dr. Susan Gennaro
Dr. Donna Hathaway
Dr. William Holzemer
Dr. Jillian Inouye
Dr. Bernadette Mazurek Melnyk

Dr. Beverly Priefer
Dr. Nancy Redeker
Dr. Anne Rosenfeld
Dr. Meredith A. Rowe
Colonel Michael L. Schlicher
Dr. Alexa Stuijbergen
Dr. Jennifer Temel
Dr. Marjana Tomic-Canic

MEMBERS OF THE PUBLIC PRESENT

Ms. Leeza Constantoulakis, American Association of Colleges of Nursing
Dr. Margo Minissian, Cedars-Sinai Medical Center
Mr. Tamak Rodney, Johns Hopkins
Ms. Kathy Sedgwick, NOVA Research Company

FEDERAL EMPLOYEES PRESENT

Dr. Sarah Abey, NINR/NIH
Dr. Lynn Adams, NINR/NIH
Mr. Brian Albertini, NINR/NIH
Ms. Irene Arveson, NINR/NIH
Dr. David Banks, NINR/NIH
Ms. Karen Bashir, NINR/NIH
Mr. Nathan Brown, NINR/NIH
Ms. Adrienne Burroughs, NINR/NIH
Dr. Ann Cashion, NINR/NIH
Dr. Young Eun Cho, NINR/NIH
Ms. Comerleta Cooks, NINR/NIH
Dr. Augusto Diana, NINR/NIH
Mr. Jeffrey Elliot, NINR/NIH
Ms. Alexandra Espina, NINR/NIH
Dr. Rebekah Feng, NINR/NIH
Ms. Ana Ferreira, NINR/NIH
Ms. Diana Finegold, NINR/NIH
Dr. Jessica Gill, NINR/NIH

Dr. John Grason, NINR/NIH
Ms. Faye Harrell, NINR/NIH
Dr. Rebecca Hawes, NINR/NIH
Dr. Wendy Henderson, NINR/NIH
Dr. Rebecca Henry, NINR/NIH
Dr. Karen Huss, NINR/NIH
Dr. Paule Joseph, NINR/NIH
Dr. Karen Kehl, NINR/NIH
Dr. Hyung Suk Bruce Kim, NINR/NIH
Ms. Diane Kuszewski, NINR/NIH
Dr. Chen Lai, NINR/NIH
Mr. Tokunbor A. Lawal, NINR/NIH
Dr. Weiqun Li, NINR/NIH
Ms. Whitney Livingston, NINR/NIH
Dr. Yujing Lui, NINR/NIH
Ms. Christiana Martin, NINR/NIH
Ms. Wendy Massias-Burnett, NHLBI/NIH
Dr. Martha Matocha, NINR/NIH
Dr. Donna Jo McCloskey, NINR/NIH
Dr. Katherine Meilleur, NINR/NIH
Dr. Jeri Miller, NINR/NIH
Ms. Michelle Millwood, NINR/NIH
Ms. Isla Norwood, NINR/NIH
Ms. Lindsey O'Keefe, NINR/NIH
Ms. Karyn Onyeneho, NINR/NIH
Ms. Shashi Ravindran, NINR/NIH
Ms. Sonia Razaqyar, OD/NIH
Mr. Mike Renner, NINR/NIH
Dr. Mario Rinaudo, NINR/NIH
Dr. Mary C. Roary, NINR/NIH
Mr. Chip Rose, NINR/NIH
Dr. Louise Rosenbaum, NINR/NIH
Ms. Regina Sheffield-Wright, NINR/NIH
Dr. Pamela Tamez, NINR/NIH

Ms. Karen Taylor, NINR/NIH

Dr. Lois Tully, NINR/NIH

Ms. Kristen Weaver, NINR/NIH

Dr. Suzanne Wingate, NINR/NIH